

Remarks

Claims 1, 2, 4, 6-12, 14-16, 18-26, 28 and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 4,918,128 to Sakai (hereinafter "Sakai"), US Patent No. 5,709,926 to Gust (hereinafter "Gust") or US Patent No. 5,861,368 to Kolaitis et al. (hereinafter "Kolaitis"). Reconsideration and withdrawal of this rejection is respectfully requested.

The crux of the instant invention lies in the ability for the adsorbent composition to flow at relatively low temperatures, thereby allowing for the insertion of the adsorbent material within narrow confines. The present claim 1 recites an adsorbent composition comprising a thermoplastic material containing a wax component and a thermoplastic resin component, and at least 15 wt.% of an adsorbent component, wherein the adsorbent composition is flowable at 124°C. and is capable of absorbing water to an extent that is sufficient for desiccating void spaces of insulated glass units.

In contrast, none of the cited references teach the use of an adsorbent composition. There is simply no suggestion in these references, and no reason that would motivate one of ordinary skill in the art to use such compositions in or as adsorbent compositions. Moreover, it is respectfully submitted that none of the cited references disclose or motivate one of ordinary skill in the art to arrive at the combination of recited properties set forth in the subject claims.

For example, Sakai describes a pressure-sensitive adhesive that is in the form of latex. The pressure-sensitive adhesive is utilized in sealing or binding slips of paper that are exposed to high temperatures during printing processes (see col.1, lines 5-65). An "essential ingredient" in the pressure-sensitive adhesive composition of Sakai is "a finely divided hard particulate material having no thermoplasticity," (see col. 2, lines 16-18). This is in direct contrast to the thermoplastic material recited in the present claims. Thus, Sakai does not teach all of the elements recited in the present claims, and there is no suggestion or motivation set forth therein to modify the pressure-sensitive adhesive composition to include a thermoplastic component instead of the "essential" non-thermoplastic component recited therein. Moreover, it would contradict the very teachings of Sakai if one were to utilize a thermoplastic component in the pressure sensitive composition described therein.

Gust describes reclaimable overhead transparencies having an anti-static binder composition coating thereon (abstract). In order to facilitate reclamation of the transparencies, the binder coating must not gel during reclamation grinding at temperatures of at least about 250°C. (see col.2, lines 59-64). Thus, the binder composition set forth in Gust would not flow at 124°C as is recited in the subject claims. Moreover, there is no suggestion or motivation set forth therein. In contrast, Gust teaches against utilizing polymers with higher melting points in order to prevent gelling or melting of the composition. Additionally, prior to formation of the coating on the transparency, the coating material is in the form of an aqueous dispersion containing significant quantities of water. In this aqueous form, the composition is not able to perform any desiccating function.

Accordingly, Gust does not teach all of the elements set forth in the recited claims and there is no suggestion or motivation for one of ordinary skill in the art to modify the teachings therein and arrive at the presently claimed invention.

Kolaitis describes particulate foam control agents containing significant amounts of zeolite carrier (Abstract). More specifically, these control agents comprise 70 to 99 parts of a zeolite carrier (see Abstract and column 9, lines 23-35). It is respectfully submitted that this significant amount of zeolite carrier would prohibit such a composition to be flowable at 124°C. Kolaitis is completely silent regarding the flowability of the antifoam control agents at elevated temperatures. Additionally, the reference in Kolaitis to use only low levels (i.e., less than 30%) of siloxane such that the foam control agent is not tacky actually teaches against use of a flowable material (column 9, lines 23-35).

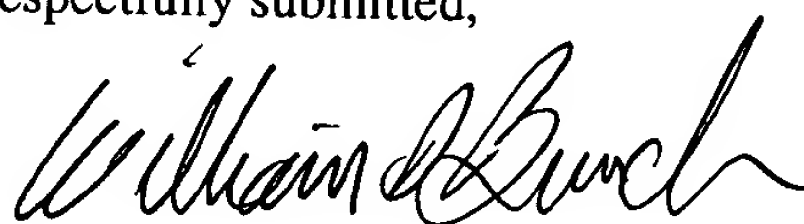
Moreover, the polymeric component in the control agent is a liquid organopolysiloxane that is soluble or dispersible in an aqueous surfactant solution (see col. 5, line 48 to col. 6, line 34). Such a polymer is not a thermoplastic material as is recited in the present claims. These silicones are liquid at room temperature and are highly volatile at elevated temperatures. In Kolaitis it is essential that the polymer be soluble or dispersible in aqueous solutions, since such material is utilized to release antifoam agents in conventional washing machines. Thus, even if the amount of the zeolite carrier would be low enough to enable the composition to flow at 124°C., it would not flow at such high temperatures since the silicone component would evaporate. Accordingly,

Kolaitis does not teach all of the elements recited in the present claims and there is no motivation or suggestion to modify its teachings and arrive at the presently claimed invention.

It is also submitted that none of the above-mentioned references suggest incorporating an adsorbent composition into insulating glass units as recited in claim 14 of the present application. It is quite clear from the intended uses and the components set forth in the compositions of these references that this would not suggest or motivate the artisan to utilize such compositions as adsorbents in insulating glass units. Moreover, these references are completely silent concerning the heating and cooling steps utilized in forming a thermoplastic adsorbent composition as recited in claim 35.

Thus, the Applicant respectfully requests the withdrawal of the rejection and submits that the claims are now in condition for allowance. Applicant respectfully requests notification to that effect in the form of a Notice of Allowance.

Respectfully submitted,



William D. Bunch
Attorney for Applicant
Reg. No. 35,027

Tel: (410) 531-4333
W. R. Grace & Co.-Conn.
7500 Grace Drive
Columbia, Maryland 21044-4098